

Massachusetts Institute of Technology
Charles Stark Draper Laboratory

MEMO

TO: All Apollo Personnel
FROM: Philip G. Felleman
DATE: 9 August 1971
SUBJECT: Apollo 15 Mission

Apollo 15 represents perhaps the most successful lunar landing mission to date. As you are aware, a vast amount of scientific data was accumulated both from the lunar surface activities and the lunar orbit activities. The Draper Laboratory can be proud of the role it played in supporting this mission as it has done so well in the past. The guidance, navigation and control equipment performed without problems both in the CSM and the LM.

As usual in the course of a mission, many "what if" exercises are performed and we participated in our share. I would like to mention two specific areas that many people worked long hours on even though no problem existed. The first was the thermal analysis of the CSM GN&C system. The coolant temperature in the vehicle reached a higher level than ever before while performing the lunar orbit science experiments and there was extreme reluctance to turn on the water evaporator to cool the systems since that would have an adverse affect on some of the science experiments. Laboratory personnel spent many difficult hours determining safe limits for the equipment operation and verified that there would be no damage at the temperature of operation. The second area was the request to generate a procedure or program to display landing radar data on the DSKY in the event that the tape meter in the LM was inoperable after the crew had found the outer glass broken on the meter. A procedure was generated and was ready for use, but was not needed as the tape meter was found to function properly.

Although these "what-if" exercises can be time consuming, personally

frustrating and unrewarding, all contractors participate and we have a small percentage of the total. However, at the occurrence of a problem, rapid solutions often depend on someone anticipating it through a "what-if" and having a ready solution available.

I would like to relay to all of you the thanks of the people at MSC to the laboratory for our support and the flawless performance of our systems. We can all share in the success of Apollo 15.